



California's Health

Vol. 17, No. 2 • Published twice monthly • July 15, 1959

THE ROLE OF THE NURSE IN THE CONTROL OF STAPHYLOCOCCAL INFECTIONS IN HOSPITALS*

EVELYN R. HAMIL, R.N.

Director of Nursing Services and Education, Los Angeles County General Hospital

The role of the nurse in the control of staphylococcal infections in hospitals is no different from the role she should assume every day. There have been other resistant infections before staphylococci, and we can be reasonably sure still others will come into prominence. From a nursing standpoint, we should not limit a discussion of infection to any particular organism, but should remember the broad base from which we operate. Essentially, the nurse gives patient care or supervises and evaluates such care; she carries out certain procedures and applies scientific principles in so doing; and she teaches both employees and patients.

The only possible difference in the role assumed by the nurse is in the degree of emphasis placed on specific functions as occasioned by specific situations, such as the increase in staphylococcal infections. I would like to point out a few areas in which the nurse needs to direct specific and concerted attention, if she is to adequately assume her role in respect to staphylococcal infections in hospitals.

First, she has to recognize that this problem exists. With continued use of antibiotics, and the reliance on them by the medical staff, many nurses have become distressingly lackadaisical about the importance of aseptic technique and the necessity for good hospital housekeeping. In

order to develop an understanding of the problem, the nurse must be acquainted with these facts:

The extent to which there has been a spread of infections in hospitals generally.

The extent to which there has been a spread of infections in the hospital in which she is working.

The areas of service in which the spread has taken place.

Causes of this spread.

How nursing is involved.

Nursing is vitally concerned with the research necessary for controlling hospital infections. Frequently it is a nursing employee who first of all sees the yellow discharge from an infant's eye, notices the red painful swollen breast of her postpartum patient, becomes suspicious of the failure of an incision to heal, or hears the complaint of an aide about the boil on her back. The nurse who knows her stuff—and her “staph”—will report these observations immediately to the proper person, usually the doctor. In addition, she will throw up a barricade of protection by instituting necessary isolation technique, moving the patient away from others, or sending the complaining employee off duty and insisting that she have medical attention. These are immediate steps in starting the research wheels rolling.

Cultures are requested; the nurse or her ward personnel help procure and take them to the laboratory. Reports come back and action is geared

to their content. Nursing must be aware of the importance of mass studies in determining the origin and extent of resistant infection among patients and personnel, because on the results of these studies depend the changes of techniques or procedures which control the existence of future outbreaks. In lending her moral and physical assistance to research studies, the progressive nurse plays a vital role in finding answers to the questions epidemiologists must explore in investigating infectious diseases. These questions include:

Where did the infection come from?

How did it get here?

Where else might it have gone?

Where might it go from here?

What can be learned from this situation for use in the future?

It can be readily seen that the alert nurse's potential aid in this detective type of activity is limitless. Clues which might never be found by anyone else are picked up and passed on if the nursing personnel close to the patient have an understanding of the nature and importance of the problem.

Once the nurse has acquired some of these facts, she can then pinpoint her responsibility to better advantage. While it is not possible to itemize these in terms of priority or of importance, the following responsibilities are undoubtedly those which assume major importance in this effort to prevent transmission of the germs from reservoirs of infection to new hosts:

*Presented as part of a panel discussion on staphylococcal infections at the meeting of the Southern California Public Health Association in Pasadena on December 5, 1958.

Establish and maintain improved techniques in the general ward nursing areas and in the special services of the hospital.

Such techniques in the general ward nursing areas will be concerned with:

- Adequate and proper hand washing.
- Disposal of contaminated dressings.
- Intelligent handling of linen—labelling contaminated linen for handling purposes.
- Adequate and proper clearing of patients' unit and of supplies and equipment used in patient care—(concurrent cleaning as well as terminal).
- Awareness of proper housekeeping and reporting of situations which contribute to the increased infections.
- Use of strict surgical aseptic technique in changing of dressings and bladder catheterization.
- Assignment of patient rooms and beds. (Avoid placing elective surgical with infectious post-operative patients.)

Techniques specific to special services in the hospital include:

- Frequent checking of all hospital sterilized materials, dressings, linen packs, instruments, water, etc., to see that they are really sterile.
- Strict attention to impeccable aseptic technique in surgical and delivery rooms.
- Care that all materials entering the newborn and premature nurseries are immaculately clean, if not sterile.
- Whether or not masks are used in nurseries, the staff should be as stable as possible. Ideally, the same nursing personnel should care for the infants all the time and these employees should not work in any other area.
- Scrubbing techniques rely strongly on the mechanical action of the brush plus a hexachlorophene soap. The old 10-minute scrub, vigorously engaged in, has proven once more the most effective of all measures in hand and arm preparation for the operating and delivery rooms, and for the nursery.
- Adequate skin preparation at site of incision.

See that the operating room is not overpopulated, and that persons who must be in the room are dressed properly, including clean scrub-apparel, caps adequately and unglamorously applied, shoes worn only in the operating suite, double thickness sterile masks over nose and mouth, changed frequently. This is a joint responsibility of all nursing and medical personnel.

Restrict wearing of scrub-apparel to the operating or delivery suite.

Persons who accompany patients to the wards after surgery wear gowns which are discarded upon return to the operating suite. This is the responsibility of every hospital employee.

Supervisors carry little "beasties," too! It is amazing how many supervisors feel that the title carries a magic protective aura which automatically repels not only the employees, but also the germs.

Special precautions are used in handling and disinfecting instruments, furniture, linen, and room after a surgical case known to be infected with any organism.

Most important in consideration of technique is building up once more in all hospital workers a healthy respect for micro-organisms and the potential hazard they present. No intelligent man casually exposes himself or others to the dangers of fire or flood, yet many of our intelligent hospital personnel bring disaster close to themselves and others every day by pooh-poohing principles of good technique and by being too busy to wash their hands between patients.

This leads to the next vital point—

Accept and carry out teaching responsibilities:

In relation to the employees: A formal program of education concerning cause of infections, spread, sources, prevention, etc., could be developed and geared to meet levels of various categories of personnel. The individual nurse may have a part in helping to develop such a program, or in participating in it. She very definitely has a responsibility for attending such programs and of assigning personnel under her supervision to attend. One responsibility in which so many nurses fail is that of follow-up of educational efforts. Any teaching

program can be effective only insofar as it changes behavior, attitudes and insights. The nurse has a real value in finding out what the employee learned and of determining that he carries out in actual practice the information gained. Teaching is one of the primary functions of the nurse, but many nurses think of teaching as the formal classroom type and do not realize the value to be gained from *incidental* teaching in favorable situations. Certainly it can readily be seen that proper technique lends itself to this type of teaching.

Another area of instruction is that concerning the employee's health. The nurse is in a unique position to guide employees in this respect. It is not necessary here to go into the usual health measures; however, it must be noted that for control of infections the nurse must be aware of any indication of active infection in employees and should send them off duty. She also must develop in the employee an understanding of the importance of reporting infections.

In relation to the patients: No one in the hospital spends any more time with the patients than nursing personnel. Thus through continued association, patients can be taught good body hygiene, including hand washings. Of rather recent origin are the more formal patient teaching programs such as those for the cardiacs, diabetics, and tuberculous. Relatives, too, can be taught and are usually a very receptive group.

In summary, then, the nurse has a real responsibility in the control of infections through:

- Developing her own awareness of the problem and what she can do about it.
- Establishing and maintaining improved techniques.
- Participating in research; and
- Teaching—both patients and employees.

And this responsibility is in no way limited to the time when she is actively concerned with "staph!"

As Hippocrates stated, "It is more important to know what kind of a person has a disease than to know what kind of a disease a person has."—*Journal of Clinical and Experimental Hypnosis*, Vol. VI, No. II, page 114.

California Boy Scout Contracts Bubonic Plague

An 11-year-old Walnut Creek Boy Scout was treated recently in Kaiser Hospital for bubonic plague, probably contracted from a flea bite while he was on a camping trip in the High Sierra. This is the second case of plague reported in California since 1947.

The youth was reported to be recovering rapidly and his condition was described as excellent. At the onset he had high fever and symptoms of general toxemia. Plague was suspected following examination of a blood culture. This was confirmed later by Dr. Karl F. Meyer, director emeritus of the Hooper Foundation, University of California, and world authority on this disease. The diagnosis was further confirmed by the California State Health Department's Microbiology Laboratory.

The youth was one of some 20 Contra Costa County Boy Scouts on a three-day camping and hiking trip in the remote Tioga Pass area of Yosemite National Park June 19th-21st. The area is remote from general camping grounds and is inaccessible by auto. While this area is strongly suspected as the site where the young scout was exposed, he had been camping in several other mountain areas in the State within a period of two weeks.

Plague has long been endemic in California. An Oxnard man died of plague two years ago, nine days after his apparent exposure to infected fleas while on an outing in Lockwood Valley and Sespe Gorge areas of Ventura County.

Spread to humans occasionally occurs from the bite of plague-infected fleas which live on rodents. Rodent plague is widespread in California, with laboratory proof of infection established in 36 of the 58 counties. The occasional human case has been confined in recent years to instances of exposure to wild rodents.

Since 1900, 405 human cases of plague have been reported in 18 counties. Of these cases, 284 were fatal. In recent years the fatality rate has decreased sharply by the early use of antibiotics.

Most of California's cases occurred in three outbreaks: San Francisco in 1900-1903 and 1907-1909; Oakland in 1919, and Los Angeles in 1924.

Warning Issued to Campers In Rabies Areas

The California State Health Department has recently warned campers against sleeping on the ground in open areas where rabies exists in wildlife without adequate protection against attack, especially from skunks.

Four Sacramento area Boy Scouts were exposed to rabies infection this spring when they were bitten by a rabid skunk that invaded their camp site near Michigan Bar. Similar incidents are reported each year.

In 1954, a California woman died of rabies following the bites of a rabid skunk. She and her husband were attacked twice during the night by a small skunk while they were sleeping in a tent in Tulare County. The skunk was killed the next morning, and proven rabid on laboratory examination.

The department's warning included the suggestion that campers sleep off the ground and in a tent which can be tightly fastened to prevent invasion by animals; or that if sleeping on the ground in the open, it may be feasible to stake out a low fence made of chicken wire.

In 41 of California's 58 counties skunk or other wildlife rabies cases have been recognized, or cases in domestic animals have been recognized with wildlife implicated as a possible source of infection. No cases, however, have been recognized above the snow line in the mountain counties of the Sierra Nevada range.

Specialists from the State Health Department's Bureau of Vector Control are working with representatives of the Communicable Disease Center of the United States Public Health Service in a survey of the Tioga Pass area for evidence of plague-infected fleas. The department and Dr. Henrik Blum, Contra Costa County Health Officer, have ruled out the boy's home and vicinity as the source of infection.

It was suggested that campers take the following precautions for protection against plague:

1. Do not handle rodents. This includes feeding friendly ground squirrels.
2. Use insect repellents.
3. Shake out sleeping bags and clothing regularly.

It is emphasized that plague cannot be contracted from mosquito bites.

Counties where cases have been recognized are: Alameda, Amador, Butte, Calaveras, Colusa, Contra Costa, El Dorado, Fresno, Glenn, Humboldt, Kings, Lake, Los Angeles, Madera, Marin, Mariposa, Mendocino, Merced, Monterey, Napa, Nevada, Placer, Sacramento, San Benito, San Joaquin, San Luis Obispo, Santa Barbara, Santa Clara, Santa Cruz, Shasta, Solano, Sonoma, Stanislaus, Sutter, Tehama, Trinity, Tulare, Tuolumne, Ventura, Yuba and Yolo.

In California from the first of the year through June 15th there have been a total of 71 cases of rabies reported in animals, of which 45 were in skunks, 3 in foxes, 12 were bovine, 6 in bats, 2 in horses, and 1 each in a cat, dog, and raccoon.

The State Department of Public Health again urged that bites of either persons or animals by animals suspected of being rabid should be reported to the local health department, and that whenever possible the whole carcass of the biting animal should be saved, intact, for examination for possible rabies. All owners of dogs and cats are strongly advised to be sure their pets are adequately vaccinated against rabies.

EDMUND G. BROWN, Governor
MALCOLM H. MERRILL, M.D., M.P.H.
State Director of Public Health

STATE BOARD OF PUBLIC HEALTH

CHARLES E. SMITH, M.D., President
San Francisco

MRS. P. D. BEVIL, Vice President
Sacramento

DAVE F. DOZIER, M.D.
Sacramento

L. S. GOERKE, M.D.
Los Angeles

HARRY E. HENDERSON, M.D.
Santa Barbara

ERROL R. KING, D.O.
Riverside

HERBERT A. LINTS, M.D.
Escondido

HENRY J. VOLONTE, D.D.S.
Hillsborough

STEPHEN I. ZETTERBERG
Claremont

MALCOLM H. MERRILL, M.D.
Executive Officer
Berkeley

STATE DEPARTMENT OF PUBLIC HEALTH
BUREAU OF HEALTH EDUCATION
2151 BERKELEY WAY
BERKELEY 4, CALIFORNIA

Requests for single copies or for placement on the mailing list may be made by writing to the above address.

Entered as second-class matter Jan. 25, 1949, at the Post Office at Berkeley, California, under the Act of Aug. 24, 1912. Acceptance for mailing at the special rate approved for in Section 1103, Act of Oct. 3, 1917.

Tuberculosis X-ray Case Finding Program Transferred

As of June 30th, the California State Health Department's Bureau of Tuberculosis Control discontinued its highly effective X-ray case-finding program. The equipment and two X-ray technicians were transferred to the State Department of Mental Hygiene, which will continue the program within its institutions.

Beginning in 1942 with pilot fluoroscopic and 35mm. minifilm surveys, which demonstrated a very high prevalence of undiscovered tuberculosis within state institutions, the bureau purchased mobile 4 x 5 X-ray equipment and began annual surveys in 1946. In addition to the state hospitals, state prisons and some state colleges, a few small community-wide surveys were also done.

During this period of time more than one and a half million films were taken, and over 8,000 cases of tuberculosis were discovered. The most striking results of these surveys were noticed in the state mental hospitals where the death rate from tuberculosis was brought down to one-twentieth of what it had been. This was accomplished by segregating and treating the cases discovered and thus cutting intramural channels of infectiousness. The program is considered a major accomplishment in the field of disease prevention.

A study was recently made on the follow-up of 211 patients who had been admitted as tuberculosis recalcitrants to the California Medical Facility at Vacaville between 1950 and 1956.

It was striking that 37, or over two-thirds, of the local health jurisdictions had sent at least one recalcitrant to the facility, and certain of the larger ones had sent several.

The group on admission was characterized by occupational vagrancy, excessive mobility, single or separate marital status; and a very large proportion of chronic alcoholism. Most were in their middle years, 25-50. Yet in spite of many unfavorable factors, 57 percent of this group had attained a status of inactivity of their disease. However, only one-fourth were reported as having improved social attitudes.

Twenty-three were readmitted to Vacaville. Twenty-one were known to be deceased, six died in the facility. On only 11 was no data available, and

Plastic Film Hazard to Infants Subject of National Campaign

The increasing national epidemic of infant deaths attributed to thin plastic bags or films reached California recently when the first such deaths in the State were reported from Los Angeles and San Francisco Counties.

While dry cleaners' bags have been most frequently involved, laundry, grocery, and shirt bags, and plastic sheeting are also implicated. Most of the deaths have occurred in young infants, among whom sudden unexplained deaths have long been a serious problem.

The Public Health Service has recently joined the American Academy of Pediatrics, the American Academy of General Practice, and a number of other organizations in endorsing an intensive four to six weeks national educational campaign on the hazards of plastic bags. The campaign is being sponsored by the Society of the Plastics Industry and is being handled by the advertising agency, Batten, Barton, Durstine and Osborn.

Known accidental deaths of children in California associated with plastic film material now number four: two 2-year-olds in Los Angeles County, one 2-month-old in San Francisco County, and an eight-week-old girl in Siskiyou County.

Because a proposed Assembly Bill requiring a printed warning on plastic bags failed to pass in the recent session of the Legislature, there are no state regulations governing plastic bags.

Court Decision Upholds Law on Rabies Control Programs

A recent decision by the Sacramento District Appellate Court upholds the law requiring boards of supervisors and city councils to provide for the maintenance of a pound system and rabies control program for dogs in counties of the State which have been officially declared as rabies areas.

This decision was handed down with reference to Amador and Lake Counties and the Cities of Amador, Jackson, Ione, and Sutter Creek. Provision for this legislation is made in Sections 1901.2 and 1920 of the Health and Safety Code.

on 13 men there had not been a check for one year or more.

Health Effects of Smog Reviewed By Department Staff

Current knowledge of effects of air pollution on health and research now in progress were reviewed by members of the California State Health Department staff before a recent meeting of Southern California health officers in Los Angeles.

Dr. Malcolm H. Merrill reviewed the state policy on air pollution and the legislative proposals related to it.

John Maga, Chief of the Bureau of Air Sanitation, reported on the state-wide program of measurements of air quality and emphasized the importance of continuously seeking methods for more accurately reflecting the biologic significance of air pollution. Laboratory methods now used in air pollution studies were described by Dr. Harold Helwig, Chief of the Air Sanitation Laboratory.

Epidemiologic studies using death records were described by Emanuel Landau, analytical statistician on assignment to the department from the Federal Air Pollution Medical Program. Dr. Charles Schoettlin, Los Angeles Public Health Medical Officer, reported on studies relating air pollution to manifestations of disease in selected groups of people. Dr. John R. Goldsmith, head of Studies of Health Effects of Air Pollution, reviewed the nationwide picture of research on the health effects of air pollution and indicated the amount and quality of work which is being done by California's medical scientists.

Attending the conference were health officers from the Counties of Los Angeles, San Diego, San Bernardino, Riverside, and Orange, and from the Cities of Los Angeles and Pasadena.

UCLA Extension Offers Courses In Public Health

Evening courses in public health will be offered by the University of California Extension in downtown Los Angeles and on the UCLA campus starting the week of September 21st.

Courses will be offered in public health statistics, industrial health, and audiometry and aural rehabilitation.

Information on these courses and related medical, laboratory, and nursing classes is available through Medical Extension, UCLA Medical Center, Los Angeles 24. Telephone BR adshaw 2-8911, Ext. 7114.

Unattached Male TB Patients Subject of Study

Recommendations regarding psychiatric, casework, and rehabilitation services for unattached male tuberculosis patients were made in a recently completed study conducted by the California Tuberculosis and Health Association.

Edward Lee Russell, M.D., Orange County health officer, served as a member of the study committee. J. Richard Wahl, Ph.D., social research technician, and Jerome Schwartz, public health analyst, both associated with the California State Health Department's Division of Alcoholic Rehabilitation were consultants to the staff of the association. The study was made under the general guidance of Mrs. Trude Baum, social studies consultant, Research and Development Division of the California Tuberculosis and Health Association.

The following recommendations are quoted from the report of the study:

"Because the unattached male tuberculosis patients in this study characteristically were over 40 years old, unemployed, homeless, beset with multiple medical problems, and removed from the regular life of the community by prolonged periods of hospitalization,

"A. IT IS RECOMMENDED that tuberculosis associations and other interested agencies work toward the provision of the following services, in order to assist this patient group to reach its optimal useful function in society.

"1. Psychiatric and Casework Services:

- (a) A complete case work-up of the social and economic history at the time of admission to the hospital, and during the period of hospitalization, a battery of psychological tests (including personality inventory and aptitude tests for every patient in the group where this is indicated).
- (b) Psychiatric and casework services as needed, including treatment for alcoholism.
- (c) Early selective referral to the appropriate agencies in the community where help might be obtained (e.g., welfare agencies, employment services, Alcohol-

ics Anonymous or alcoholic rehabilitation centers, etc.).

- (d) Intensive use of pre-discharge case conferences in behalf of unattached male tuberculosis patients, even though no easy solution to their problem is seen by agency representatives.

"2. Rehabilitation Services:

- (a) Encourage acceptance of older men for rehabilitation services where feasible.
- (b) Employment services for older men with a program of education for industrial employment offices and other employers on the employability of the ex-tuberculosis patient.
- (c) Rehabilitation services for alcoholics.
- (d) Measures to insure professional accuracy in prescribing the workability and the limitations of the discharged patient. (The description 'light work' may hinder employment.)
- (e) Training in self-care for patients who will not be able to compete for industrial employment.
- (f) Formal adult education facilities should be available in tuberculosis hospitals for both employable and nonemployable patients who have some potential for improvement."

In addition to the above recommendations, suggestions were also made concerning housing and general relief for this particular group of tuberculosis patients.

Copies of the complete report, *One of Every Three Patients*, are available from the California Tuberculosis and Health Association, 130 Hayes Street, San Francisco 2, California, at \$1 each. Copies of a summary of the report may be ordered at 15 cents each.

Courses for Graduate Nurses List Available

The California League for Nursing, Committee on Careers in Nursing, has compiled a list of current courses, workshops, and institutes for graduate nurses.

The list gives dates, location, fees, where to apply, etcetera, for courses

Amador and Calaveras Counties Contract for Health Services

Two more of California's mountain counties have contracted for public health services, effective July 1, 1959.

As the result of contracts between the California State Department of Public Health and the counties' boards of supervisors, public health services are now being provided to the 86,000 permanent residents of Amador and Calaveras Counties and for the great numbers of recreation seekers during the year around sports seasons.

The Amador County contract was completed following a five-month study of health needs by a citizens' committee instituted by the Amador County Tuberculosis and Health Association with the endorsement of the Amador County Board of Supervisors. The committee's findings and recommendations will be of invaluable assistance to the new health department.

Under contract services, as provided for in Section 1157 of the California Health and Safety Code, each contracting county provides office space, clerical help, and a part-time health officer who is a local physician appointed to the position by the county's board of supervisors.

Services provided by the State Health Department to the contracting counties include those of resident public health nurses and sanitarians; necessary public health pharmaceuticals, biologicals, and technical supplies; professional guidance and services from public health physicians; a supervisor of public health nursing; a supervisor of sanitation; and a health educator; and as necessary, consultation and assistance on the various aspects of public health from specialists. Laboratory services are also provided by the State Health Department.

A total of 10 counties are now contracting with the department for public health services. The six counties without organized public health services are: Glenn, Lake, Lassen, Siskiyou, Tehama, and Tuolumne.

throughout the State of California. To receive a copy send your request, with a stamped return envelope, to California League for Nursing, Inc., Committee on Careers in Nursing, 465 Post Street, San Francisco 2, California.

Continuing Immunization Gaps Shown by Polio Surveys

The fact that two-thirds of California's cases of paralytic polio in 1959 occurred in unvaccinated persons gives impetus to the urgent need for stepping up polio immunization programs.

To date four local health departments have completed special surveys to obtain information for better direction of their polio immunization programs and for use in gaining the co-operation of the many community groups concerned. One more survey is under way and another is being planned. Consultation and assistance to these six departments have been given by the California State Department of Public Health. Other local health departments have made assessments of the polio immunization level of their jurisdictions without making special surveys.

Although the specific levels of immunization vary from area to area, the surveys have shown that, in general, throughout all age groups, the higher the socioeconomic level the higher the proportion of persons with completed immunization—three or more polio shots. In other words, the lower socioeconomic groups have the least protection from polio. The most completely vaccinated age group is the 5- to 14-year-old. Preschool children and young adults, both highly susceptible groups, are less well protected by vaccination. Only a small percentage of the persons over 40 have completed immunization series to date.

Public Health Workers and Families Receive Polio Shots

Since polio vaccine became readily available two years ago, immunizations have been offered to California State Health Department employees and their dependents.

In six sessions in Berkeley, sponsored by CSEA Chapter 132 and California Public Health Associates, over 1,800 injections have been given at cost. About one-third of the shots have been given to members of employees' families. The program has served 886 persons of all ages, with more than 600 receiving their third or fourth polio vaccination in this clinic.

New Swimming Pool Law Insures Sanitation and Safety

Attempts at legal enforcement of California's swimming pool regulations through court action in 1956 and an informal legal opinion in 1957 brought to light defects in the Swimming Pool Act. A bill introduced in the 1957 Session of the Legislature to correct these defects failed. But after an interim period, with the help of various interested groups in the State, Senate Bill No. 271 was passed this session and signed by the Governor, effective September 17, 1959.

The original act controlling sanitation of swimming pools, adopted in 1917, required a permit from the State Board of Public Health for each pool. This was modified in 1932 to apply only to public swimming pools and to permit enforcement by local health departments.

The new law accomplishes three major objectives: It requires that every person operating or maintaining a public swimming pool do so in a sanitary, healthful, and safe manner; includes definite statements of legislative intent establishing criteria needed as a legal basis for adopting effective regulations; and provides that any violation of the regulations drawn pursuant to the act constitutes a misdemeanor.

Alcoholism in San Francisco Subject of Report

A vigorous community-wide program of education, service, and research for the solution of San Francisco's alcoholism problem is recommended in the recently issued report of the Community Health Services Committee, Health Council, United Community Fund of San Francisco.

The 51-page *Report on Alcoholism in San Francisco* includes recommendations for prevention and treatment of alcoholism, background data on alcoholism, prevalence and rates of alcoholism in San Francisco and estimates of persons under care; and existing resources and assessment of unmet needs regarding alcoholism in San Francisco.

This is the third of a series of reports on a three-year survey (1956-59) of community health and rehabilitation needs and resources in San Francisco. The first two reports were: (1) *San Francisco Doctors Report on Community Needs and Resources in San Francisco*, September, 1957, and

Agencies' Responsibilities in Isotope Handling Discussed

California's responsibility in isotope licensing and inspection, the need for co-operative effort and liaison with state agencies in event of nuclear weapon "incidents," and meteorologic considerations in surveillance activities were considered in a Radiation Surveillance Network Conference in Las Vegas recently in which the California State Department of Health was represented.

The hazards surrounding the arming of Strategic Air Command bombers with nuclear bombs on "alert" status were described. These hazards include incidents such as fires, truck-plane collisions, etc. Several past incidents were discussed with emphasis on the need for co-operative effort and liaison with state agencies. SAC has organized an "incident control" program with provision for well-equipped emergency assistance teams. The lack of specific areas of authority and responsibility for the effects of, or control of, incidents beyond the geographical limits of air bases was stressed. This applies principally to the off-base effects of smoke from burning plutonium.

In a discussion on meteorologic considerations in surveillance activities, it was reported that soil contamination by strontium 90 varies directly with the rainfall. Due to the prevailing winds, the off-site fallout incident to testing in Nevada has generally been relatively low for California as compared to the Rocky Mountain area and the Midwest. Fallout from the stratosphere shows peak levels in the midlatitudes of the Northern Hemisphere, and shows a peak in the spring months. This spring peak is expected to continue regardless of current testing.

A panel discussion on state programs showed that California needs legislative and budgetary support to match the programs in many other states.

(2) *Report on Mental Health Needs and Resources in San Francisco*, June, 1958, and the *Conclusions and Recommendations* for this mental health report issued by the committee in October, 1958.

Copies of the *Report on Alcoholism in San Francisco* are available for \$1, plus tax, from the United Community Fund, 2015 Steiner Street, San Francisco 15, California.

State's Air Quality Standards To Be Set by Department

Action taken during the 1959 Session of the California State Legislature gives the California State Department of Public Health responsibility for determining and setting standards for air quality in California.

Two of the bills passed for this purpose set February 1, 1960, as the date by which this must be done. One of the acts, known as the "Rees-Richards Act," states in part:

"It shall be the duty of the State Director of Public Health to determine by February 1, 1960, the maximum allowable standards of emissions of exhaust contaminants from motor vehicles which are compatible with the preservation of the public health including the prevention of irritation to the senses."

An excerpt from the second act reads:

"The State Department of Public Health shall, before February 1, 1960, develop and publish standards for the quality of the air of this State. The standards shall be so developed as to reflect the relationship between the intensity and composition of air pollution and the health, illness, including irritation to the senses, and death of human beings, as well as damage to vegetation and interference with visibility."

Both of these acts provide that the standards shall be developed after public hearings at which interested persons may make or file statements concerning problems of air quality control.

The purpose of the Rees-Richards Bill is to establish a standard for pollutants emitted from motor vehicles which can be used as a basis for controlling this source of air pollution.

The act requiring the department to set standards for the quality of the air of the State is aimed at trying to set levels of pollutants that can be used as limits in planning air pollution control programs. It is expected that the first standards to be set will be modified as research continues.

The adoption of standards, both for community air quality and for automobile exhausts, will be a pioneering effort by the State Health Department since such standards have not been adopted elsewhere.

"One of the measures of effectiveness of an organization is the extent to which the aims of the informal organization correspond with those of the formal."—*Industrial Psychology*, Joseph Tiffin and Ernest J. McCormick, 4th edition, Prentice-Hall, Inc., New Jersey, 1958, page 371.

Electronic Data Processing Speeds Cancer Tabulations

Detailed tabulations describing the nearly 200,000 neoplasm cases in the California Tumor Registry will be compiled and produced in the space of four hours by an electronic data processing machine this year.

The Registry, in the California State Health Department's Bureau of Chronic Diseases, was granted a special contract in the amount of \$9,909 for the project by the Cancer Chemotherapy National Service Center, National Cancer Institute, United States Public Health Service.

The tumor registry has been in operation since 1947 and now has the largest collection of cancer abstracts in the Country. More than 205,000 tumor cases have been reported to the registry by the 38 participating hospitals in the State.

The IBM 704 will mull over punched card data from almost 200,000 neoplasm cases, perform millions of calculations within four hours, and then produce a complete set of detailed tabulations. But before the machine can make its calculations it will require four man-months of intensive programming to instruct the machine, in the finest detail, on what steps to take.

The data will be used for two major purposes. One is the production of a monograph entitled *Cancer Registration and Survival in California*. This will be a detailed account of what is happening to cancer patients in the State, describing the people who get cancer, the sites of the body involved and the nature of the cancers, the treatment given to such patients, and the prognosis in terms of survival. Because it will be based on the largest number of cancer cases in a single registry in the Nation, it will be of great value to the medical-scientific professions.

The tabulations will also be used for presentation at the Fourth National Cancer Conference in Milwaukee in September, 1960. This national meeting is held every four years and is the largest and most important cancer meeting in the Country.

The department is considering further use of more advanced electronic data processing equipment in its operations. Inservice training and orientation to the advanced equipment has recently been completed for a substantial number of technical profes-

Public Health Positions

Alameda County

Assistant Health Officer: Salary range, \$1,048 to \$1,155. To direct a major program or a geographical division of the health department. Requires three years of public health medical experience, or one year of graduate study in public health, plus two years experience.

Public Health Medical Officer: Salary range, \$905 to \$998. To work as an administrator of a county health department bureau. Requires California medical license, plus one year of medical experience in public health.

Public Health Nurse: Salary range, \$458 to \$530. Generalized nursing program. Many positions include school nursing. Requires California PHN certificate or eligibility.

Cerebral Palsy Therapist (physical): Salary range, \$415 to \$505. Requires both national and California registration, plus one year of experience in physical therapy.

For further information regarding any of these positions write to Alameda County Civil Service Commission, 12th and Jackson Streets, Oakland 7, California or telephone HI gate 4-0844, Ext. 255.

Kings County

Laboratory Director: Salary range, \$430 to \$516. One-man laboratory.

Public Health Director: Salary range, \$849 to \$1,017. Requires at least three years experience. M.P.H. preferred, but not mandatory.

For further information about either of these positions contact Mrs. Evelyn Martin, 1221 West Lacey Boulevard, Hanford, California, telephone: LU dlow 4-3331.

Long Beach City

Public Health Analyst: Salary range, \$417 to \$510. Requires bachelor's degree with major in public health statistics, or social sciences, including courses in statistics. Write to I. D. Litwack, M.D., Health Officer, 2655 Pine Avenue, Long Beach 6, California, or to Civil Service, Room 332, Municipal Utilities Building, 215 West Broadway, Long Beach 2, California.

Santa Barbara County

Public Health Analyst and Office Manager: Salary range, \$412 to \$502. Starting salary depends on qualifications and board approval. Combination position including general administrative responsibilities. Requires broad knowledge of public health, plus ability to analyze, interpret, and present data objectively. Contact Joseph T. Nardo, M.D., M.P.H., County Health Officer, P. O. Box 119, Santa Barbara, California.

Santa Clara County

Medical Social Worker: Salary range, \$412 to \$502. Position assigned to Crippled Children Services. Requires training and experience equivalent to college degree, with specialization in social sciences and one year's experience as social case worker, part of which has been in medical social work. Apply to W. Elwyn Turner, M.D., Director of Public Health, Santa Clara County Health Department, 2220 Moorpark Avenue, San Jose 28, California.

sional research and statistical staff within the department.

Increased Reporting of Strep Infections Continues

Reports of streptococcal infections in California continue at a very high level. The tremendous increase in reporting began early in 1958 and reflects the interest and activity of local public health laboratories with relation to the program for control of these infections. Orange County has reported the greatest number of infections. This local health department was one of the first to offer unlimited laboratory services to the local physicians for the diagnosis of streptococcal infections.

A number of other local health departments have developed, or are developing, programs for the control of streptococcal infections and are providing laboratory diagnostic services as a part of the community effort. These health jurisdictions include Contra Costa, Marin, Sacramento, San Jose, Santa Clara, Solano, and Sonoma Counties. With increased laboratory services available, the reports for streptococcal infections will probably increase to an even greater extent.

It would appear that streptococcal infections are a major problem in California and constitute a large segment of the presently reported total morbidity from infectious disease. They provide local health departments with an opportunity to study the epidemiology of these infections which are prompting the increased use of laboratory facilities.

Study of Infectious Hepatitis In California Completed

A study has just been completed on the natural history of infectious hepatitis in the general population in California. Previous studies usually have been confined to epidemic situations or to "closed" populations such as those in institutions.

For a period of two years a cooperative study was carried out by the California State Health Department and six local health departments in Los Angeles, Santa Clara, and Alameda Counties. Local health department personnel made home visits on all "reported" cases of hepatitis. Through these follow-up visits additional cases were discovered. A total of 1,546 cases and 3,888 other family members "not ill" were investigated.

Gamma globulin, a product made from human blood, is recommended for the protection of persons who have been exposed to infectious hepatitis. Forty percent of the total 5,434 individuals included in the study received injections of this material. The use of GG was shown to be effective in protecting exposed family contacts. The attack rate of illness was 18 percent in those not receiving gamma globulin, as compared to 2.3 percent in those receiving it.

The report on this study will be submitted for publication at an early date.

Second Air Pollution Workshop Held in Riverside

A conference-workshop on techniques in air pollution was held recently at the University of California in Riverside.

The meeting, organized and sponsored by the California State Health Department's Air and Industrial Hygiene Laboratory, was the second in a series for the continuing exchange of information among those engaged in technical studies of air pollution problems in California.

Representatives of health departments, air pollution control districts, and universities throughout the State gave papers on their research into biological aspects of air pollution and the application of physical-chemical techniques to the solution of air pollution problems.

Chemists from the department's Air and Industrial Hygiene Laboratory made recommendations for standardization of surveillance methods, including sampling and analysis of air pollutants and methods of calibration of recording atmospheric analyzers.

Firsthand observations were made of the university's air pollution research facilities where experiments are conducted toward reducing the annual loss of millions of dollars through smog damage to crops throughout the State.

Plans were made for the next semi-annual conference to be held in the Bay area later this year.

